

# Queen Elizabeth University Hospital Independent Review

## THE INDEPENDENT REVIEW OF INFECTION CONTROL CONCERNS AT QUEEN ELIZABETH UNIVERSITY HOSPITAL AND ROYAL HOSPITAL FOR CHILDREN, GLASGOW.

June 2019

### Background:

Since opening in 2015 the Queen Elizabeth University Hospital (QEUH) in Glasgow has experienced problems with rare microorganisms. A small number of patients have contracted severe infections and several rare microbiological contaminants with the potential to cause serious infections have also been identified. These have been linked to issues with water quality and ventilation systems and have been the subject of reviews undertaken by the Healthcare Environment Inspectorate and Health Protection Scotland.

To address concerns about patient safety the Cabinet Secretary for Health and Sport set up an Independent Review (“the Review”) to look at the buildings’ “design, commissioning and construction, handover and ongoing maintenance and how these matters contribute to effective infection control.” The Review’s recommendations will be made public and the Scottish Government will inform the Parliament of its response to the Review recommendations.

### Remit:

*“To establish whether the design, build, commissioning and maintenance of the Queen Elizabeth University Hospital and Royal Hospital for Children has had an adverse impact on the risk of Healthcare Associated Infection and whether there is wider learning for NHS Scotland.”*

### Terms of Reference:

There is public and professional concern that the built environment at the Queen Elizabeth University Hospital (QEUH) and Royal Hospital for Children (RHC) is compromising best practice in infection prevention and control and increasing the risk of Healthcare Associated Infection.

Dr Andrew Fraser and Dr Brian Montgomery have been appointed by the Cabinet Secretary for Health and Sport to co-Chair the Review to investigate these concerns, make recommendations and highlight learning for NHS Scotland. The Review has

specifically been tasked to undertake a clinically-focussed approach which examines the built environment with particular reference to the design, build, commissioning and maintenance of QEUH/RHC.

The Review, which is non-statutory, will be conducted according to the principles laid out in Professor Alison Britton's report, *"An Investigative Review into the process of establishing, managing and supporting Independent Reviews in Scotland."*

### **Scope of the Review:**

The Review will examine:

1. The new QEUH and RHC buildings on the greater QEUH campus site;
2. The governance processes in place to oversee the project as it moved through the phases of design, build, commissioning and maintenance with particular regard to issues relating to infection prevention and control;
3. The extent to which decision makers took account of infection prevention and control issues at each phase;
4. The overall design of QEUH/RHC with particular reference to site selection, the safety of water systems, drainage systems and ventilation systems – general and specialised;
5. Whether at all stages of design, build, commissioning and maintenance, the built environment complied with relevant legislation, standards, recommendations and guidance relating to infection prevention and control that applied at that time;
6. If changes to the specification occurred, whether issues relating to infection prevention and control were considered and addressed appropriately;
7. Whether the hospital has been utilised in a way that differs from the original design intentions and whether this has compromised the delivery of optimal conditions for infection prevention and control.

### **Out of Scope:**

1. Other buildings on the campus, including the retained estate that predates the QEUH/RHC;
2. The clinical management of individual patients or specific groups of patients;
3. Aspects of the design, build, commissioning and maintenance of QEUH/RHC which do not impact directly on infection prevention and control;
4. Issues relating to the concerns at QEUH/RHC which have already been satisfactorily addressed and implemented, or are going to be addressed by one or more of the concomitant reviews, inspections or inquiries.

### **Approach:**

1. Extensive preliminary work undertaken to establish the processes, structures, support and governance required to ensure a robust Review;

2. Selection of key advisers, sourcing specialist advice and developing secretariat function and team;
3. Agreeing the remit, drawing up preliminary Terms of Reference and inviting feedback on these;
4. Visits to various hospitals and specific sites;
5. Developing protocols and methods of working;
6. Information gathering including collation of key documentation;
7. Analysis of documentation, including correspondence and transactions surrounding the specification and placing of the contract to construct the QEUH/RHC as well as relevant developments and decisions that altered the design and build throughout the construction period;
8. Analysis of documentation of decisions, taking into account testing and monitoring data around the time of commissioning the new hospital elements, as and when it opened to patients;
9. Analysis of post-construction surveys of the QEUH/RHC and in particular those surveys intended to test and/or quality assure systems within the buildings;
10. Assessment of existing evidence, legislation, standards, guidance relating to the building of clinical facilities with particular regard to infection prevention and control.

### **Communications:**

The Review will invite written communications from:

- Patients and families with experience of care delivered in QEUH/RHC where there are concerns in relation to infection prevention and control;
- Stakeholders with involvement in and/or experience of the design, build, commissioning and maintenance of QEUH/RHC;
- Staff (clinical, estates, domestic, management) working within QEUH/RHC with particular reference to the impact of the built environment on the delivery of best practice in infection prevention and control;
- External stakeholders (members of the wider public and their representatives);
- Individuals or groups with concerns relating to the built environment and its impact on infection prevention and control.

There will follow a period of familiarisation with documentation, building a chronology of events and identifying emerging issues. As part of this process, the Review team will establish a list of relevant witnesses and issue invitations to interview.

The Review team will arrange interviews, transcribe proceedings, seek comment/amendment to transcriptions, and sign-off by those present.

In the closing phase, the Review will select preliminary findings/recommendations, and thereafter proceed to prepare and submit its final report.

This list is not exhaustive.

Written communications can be submitted via the following routes:

- Email: [information@queenelizabethhospitalreview.scot](mailto:information@queenelizabethhospitalreview.scot)
- Address: PO Box 27152, Glasgow, G2 9LX
- Website: [www.queenelizabethhospitalreview.scot](http://www.queenelizabethhospitalreview.scot)

Review team members plan to meet with individuals and groups in their areas of expertise to share and discuss specific concerns over and above the information provided in written communications.

## Appendix A

### GLOSSARY OF TERMS

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| <b>Build</b>                 | Commission, finance and oversee the building of (something).<br>From: English Oxford Living Dictionaries (viewed 13.03.19)<br><a href="https://en.oxforddictionaries.com/definition/build">https://en.oxforddictionaries.com/definition/build</a>   |
| <b>Commissioning</b>         | The process of running the building services systems installed within a building for the first time and performing various tests and checks to ensure that they operate correctly.<br><br>Gorse, Christopher Johnston, David Pritchard, Martin. (2012). Dictionary of Construction, Surveying and Civil Engineering. Oxford University Press.   |
| <b>Commissioning Service</b> | Service to advance a construction works or installation from the stage of static completion to full working order.<br>BS ISO 6707-2:2017 Buildings and civil engineering works — Vocabulary: Part 2 Contract and communication terms; 3.3.3 commissioning service   |
| <b>Construction</b>          | The process of creating or altering a building, structure, or object.<br>Gorse, Christopher Johnston, David Pritchard, Martin. (2012). Dictionary of Construction, Surveying and Civil Engineering. Oxford University Press.  |
| <b>Design</b>                | A model, sketch, drawing, outline, description, or specification used to create the vision of that which is to be created—a working item, product, building, or structure. Design can be considered as:<br>1. Concept design: information that conveys the general idea or vision.<br>2. Working design: information developed by pulling together details and specifications from the various trades and professionals building and integrating the content so that all of the information can function and fit together without gaps. The developing design is often broken down into stages with different stages being completed as the information from different groups or professionals is brought together.<br>3. Final design: possesses sufficient detail to ensure that a fully functional product can be created.<br><br>Gorse, Christopher Johnston, David Pritchard, Martin. (2012). Dictionary of Construction, Surveying and Civil Engineering. Oxford University Press.<br>See also: <a href="https://www.designingbuildings.co.uk/wiki/Design">https://www.designingbuildings.co.uk/wiki/Design</a> |

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| <p><b>Design Process</b></p>                         | <p>Process determining properties for an intended construction works before it is made physical.<br/>BS ISO 6707-2:2017 Buildings and civil engineering works — Vocabulary: Part 2 Contract and communication terms; 3.2.36 design process</p>  |
| <p><b>HAI</b></p>                                    | <p>Healthcare Associated Infection. These infections develop either as a direct result of healthcare interventions such as medical or surgical treatment, or from being in contact with a healthcare setting. The term HAI covers a wide range of infections and can pose a serious risk to patients, staff and visitors.</p>   |
| <p><b>Infection Prevention and Control (IPC)</b></p> | <p>An area of clinical specialism which seeks to enhance patient safety by reducing the incidence and prevalence of infections in healthcare environments through managing and reducing risk. This includes risks associated with design of the healthcare environment, water safety at all stages of design build commissioning and ongoing maintenance, ventilation, general maintenance, cleaning practices and clinical practice.</p> <p>The underpinning principle is to create governance and assurance systems and processes around the IPC agenda that reduce risk to patients, public and staff within healthcare environments.</p> <p>IPC specialists are also involved in advising on compliance with relevant guidance, standards, legislation and regulation.</p>  |
| <p><b>Maintenance</b></p>                            | <p>The work necessary to keep things operating properly and in a good state of repair. To ensure that plant and equipment are always operational, a ‘planned preventive maintenance’ programme should be used. To ensure that machinery operates continually, parts that wear and have a limited lifespan need to be checked and replaced before they cease to function; regular maintenance should ensure that the parts are always in good working order. Other decorative items will also need to be checked and any necessary work undertaken to ensure that they are visually appealing.</p> <p>Maintenance encompasses standards of cleanliness of the facility in all relevant areas that affect potential infection risks, clinical practice and the governance of infection control standards, and the interplay between facilities management and infection prevention and control.</p> |
| <p><b>Planning Process</b></p>                       | <p>Refers to the planning and resourcing of a significant construction project that requires significant capital investment. Incorporates the process from conception of idea to creating a business case for the project as well as the procurement process and project delivery.</p>  |

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| <b>Procurement</b>                                     | Process which creates, manages and fulfils contracts relating to the provision of goods, services and construction works or disposals, or any combination thereof<br>BS ISO 6707-2:2017 Buildings and civil engineering works — Vocabulary: Part 2 Contract and communication terms; 3.5.18 procurement.   |
| <b>QEUH</b>  | An acronym for the Queen Elizabeth University Hospital which is used interchangeably to refer to the whole hospital estate as well as the main fourteen floor adult building. For the avoidance of doubt, reference to the QEUH within the Terms of Reference means the main building primarily delivering adult patient care and services; however the co-Chairs reserve the discretion to use the term QEUH Independent Review as a short form for both the adult and children’s hospital units. |
| <b>RHC</b>   | An acronym for the Royal Hospital for Children. Reference to the RHC within the Terms of Reference refers to the building primarily delivering clinical care and services for children.  |
| <b>Retained Estate</b>                                 | Buildings on the wider campus that pre-date the construction of the new QEUH and RHC. This includes the Institute of Neurological Sciences, the Spinal Injuries Unit, the Maternity Unit and the Medicine for the Elderly Unit (Langlands).  |
| <b>Value Engineering</b>                               | Value techniques applied during the design or ‘engineering’ phases of a project.<br>Designing Buildings Wiki<br><a href="https://www.designingbuildings.co.uk/wiki/Value_engineering_in_building_design_and_construction">https://www.designingbuildings.co.uk/wiki/Value_engineering_in_building_design_and_construction</a> [accessed 09/04/19]  |
| <b>Value Management (see also ‘Value Engineering’)</b> | The process of determining the function and performance criteria required, and identifying products and services at the lowest cost that meets the criteria.<br>Gorse, Christopher Johnston, David Pritchard, Martin. (2012). Dictionary of Construction, Surveying and Civil Engineering. Oxford University Press.  |